

1998



FOAMGLAS

T. M. REG. U. S. PAT. OFF.

Waterproof Fireproof

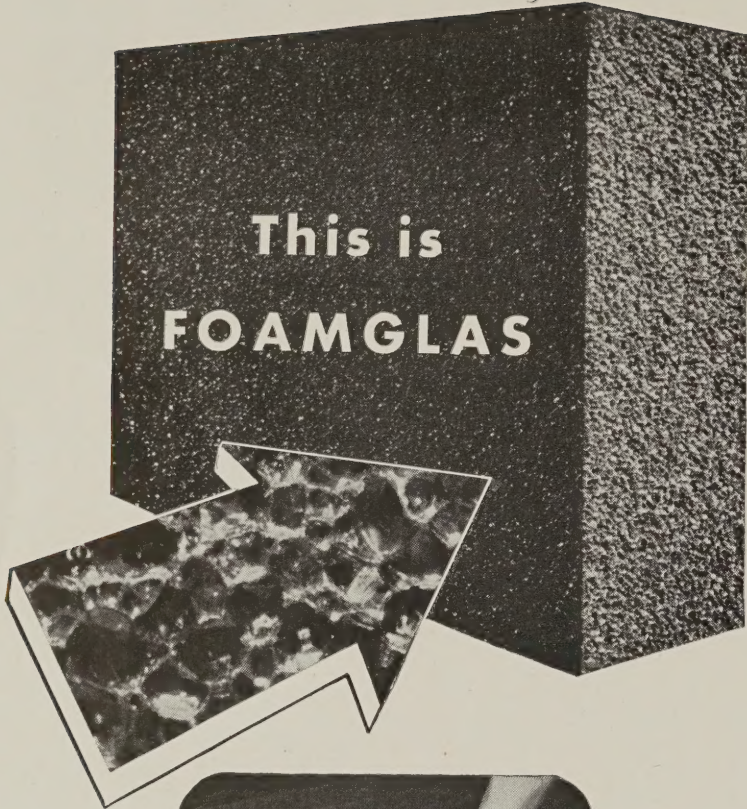
PERMANENT INSULATION

for
**ROOFS
WALLS
FLOORS
PROCESSING
EQUIPMENT**

PITTSBURGH CORNING CORPORATION

632 DUQUESNE WAY • PITTSBURGH 22, PENNSYLVANIA

FOAMGLAS INSULATION *for* ROOFS • WALLS

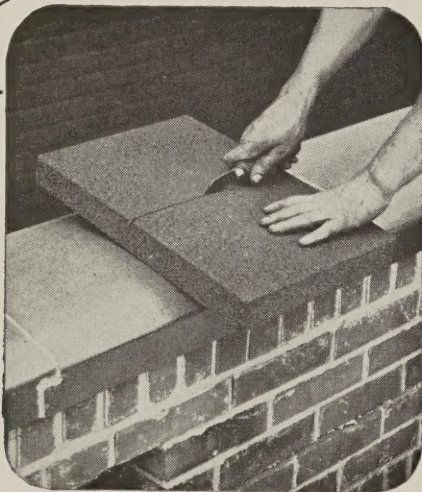


**This is
FOAMGLAS**

PC Foamglas is a true glass which has been cellulated by the evolution of internal gas at high temperature. A section of Foamglas is a mass of tiny, sealed air chambers—so many that a cubic foot contains over 10,000,000 of them. The natural inorganic characteristics of glass, plus the unique structure of Foamglas together make it ideal for many uses.

The basic materials and cellular structure of the strong, rigid blocks of Foamglas give it qualities not possessed by any other insulating material. It retains its insulating value *permanently*. Built up into or against a vertical wall, it cannot slip out of place. Under a cover floor, it will not pack down. On a flat-deck roof it does not absorb water even if the protective roofing material becomes leaky.

In a wide variety of industrial plants and processes, PC Foamglas helps to maintain desired temperatures, and in most cases prevents condensation, throughout the life of the buildings in which it is installed.



Easy to cut and shape

The strong, rigid blocks of PC Foamglas can be quickly and easily cut and shaped to fit around openings or projections, with ordinary tools, right on the job.

The unique qualities of PC Foamglas Insulation will doubtless recommend it to you for use on roofs, in walls, floors, ceilings, partitions and insulated shields and screens and for tanks, towers, ducts and breeching.

Every architect, engineer and plant maintenance official should know why PC Foamglas Insulation is so efficient—trouble-free—economical.

On the following pages you will find full engineering information on PC Foamglas, with helpful, explanatory tables, lists and charts.

PERMANENT INSULATION VALUE

PC Foamglas will not absorb moisture. It eliminates the necessity of expensive repairs, commonly caused by deterioration of the insulation material resulting from dampness. Its insulation value remains constant indefinitely, and it is, therefore, superior to other insulating materials.

MOISTUREPROOF

Tests show that PC Foamglas, with its millions of tightly sealed cells, is vaporproof. Complete immersion tests in water will readily demonstrate its character. Should the finished roof surface be punctured in service, no water will travel into or through the Foamglas Insulation to result in widespread damage and impair the performance of the insulation.

NONCOMBUSTIBLE

As a true glass, Foamglas is noncombustible. This characteristic is especially valuable where it is used as insulation on flat roofs, over materials which are not fire-resistant.

PC Foamglas complies with the requirements of Underwriters' Laboratories, Inc., and is listed under Label Service, Guide No. 540 I0, December 11, 1946, File R2844.

FLOORS • PROCESSING EQUIPMENT

LIGHT WEIGHT

PC Foamglas has a specific gravity of 0.168, weighing an average of 10½ pounds per cubic foot. Because it is impervious to water and consists of sealed cells, it is buoyant. Thus it is applicable to various types of floats, life rafts, lifeboats, industrial floats, etc. Its weight is comparable to that of cork or commercial balsawood.

ODORLESS — VERMINPROOF

Once it is installed, PC Foamglas does not absorb or emit objectionable odors. Vermin won't gnaw their way through Foamglas. And it provides no food or nesting material for rodents or other pests.

RIGID

PC Foamglas is more rigid and stronger than most materials regularly used for insulation and buoyancy. It will support its own weight in any type of wall construction without danger of crushing or packing. This makes it ideal for building up self-supporting partitions or walls of solid insulating material. It should not, however, be used as a load-bearing wall.

DURABLE

PC Foamglas is highly durable. This inorganic material is not harmed by most acid atmospheres or solutions that would quickly deteriorate many other insulating or buoyant materials. Its properties include high resistance to crushing and bending.

PHYSICAL PROPERTIES OF PC FOAMGLAS

Absorption	.005 lbs. per sq. ft. of surface area. (Penetration approx. ½" — surface cells only)
Capillarity	0
Coefficient of Expansion (°F.)	.000005
Combustibility	Incombustible
Compressive Strength	150 lbs. per sq. in.
Flexural Strength	130 lbs. per sq. in.
K (Conductivity at 50° F.)	0.40 B.t.u./Hr./Sq. Ft./°F./In.
K (Conductivity at 300° F.)	0.55 B.t.u./Hr./Sq. Ft./°F./In.
Modulus of Elasticity	200,000 lbs. per sq. in.
Moisture Vapor Transmission	0 (Impervious structure)
Resistance to Acids	Impervious to common acids and acid fumes
Specific Gravity	0.168
Specific Heat	.199 B.t.u. per lb. per °F.
Thermal Diffusivity	.38 sq. ft. per day
Weight	10.5 per cu. ft.

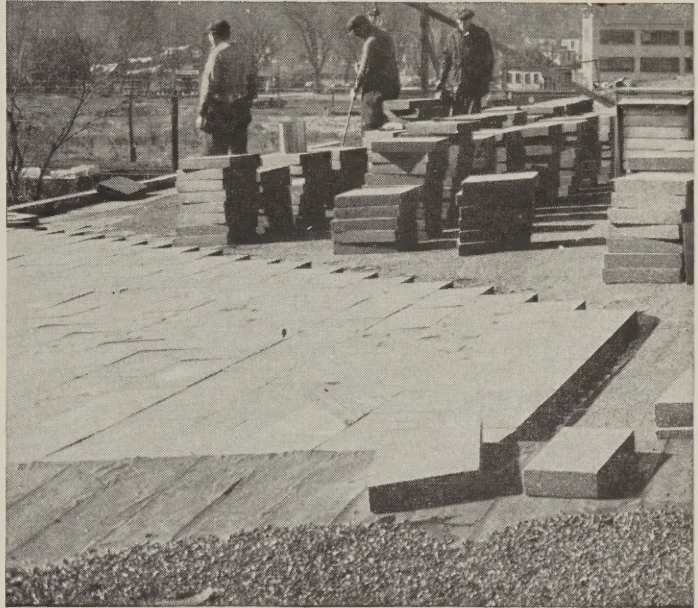
The above properties are based on an average weight of 10.5 lbs. per cu. ft.

The material is supplied in a weight range from 9.5 lbs. to 11.5 lbs. per cu. ft.

SIZES AND PACKING

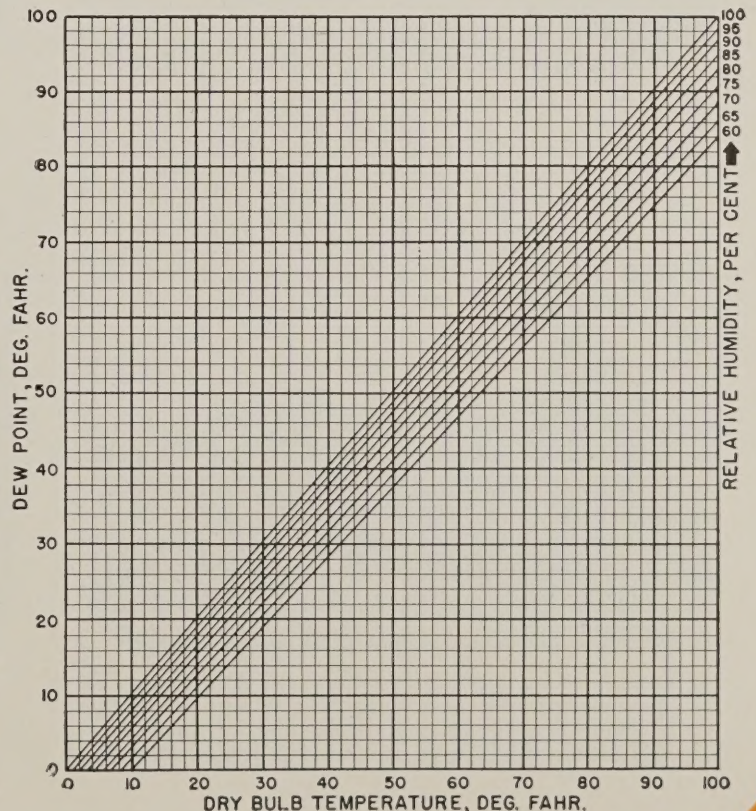
Standard Sizes	Pieces per Carton	Sq. Ft. per Carton	Approximate Weight per Carton
12 x 18 x 2	12	18	34.0 lbs.
12 x 18 x 3	8	12	33.5 lbs.
12 x 18 x 4	6	9	33.5 lbs.
12 x 18 x 5	6	9	40.5 lbs.

NOTE: Dimensions for all size blocks are subject to a tolerance of 1/16" plus or minus.



This re-roofing job includes permanent insulation. Roofers found that the big light slabs were easy to handle, that they made a firm even base for roofing felt.

DEW POINT TEMPERATURES FOR VARIOUS AIR TEMPERATURES AND RELATIVE HUMIDITIES



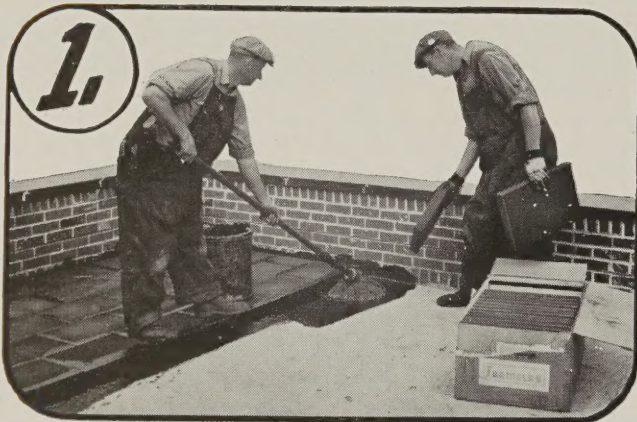
PC FOAMGLAS INSULATION FOR FLAT DECK ROOFS

PC FOAMGLAS is an ideal insulating material for flat-deck roofs with slope not exceeding 2" to 1'-0" of wood, concrete or other materials, under built-up roofing, because its low conductivity is permanent. It is vaporproof and waterproof, and therefore the insulation value does not change. It is not necessary to use vapor sealing to protect the Foamglas Insulation against humidity because it is impervious to moisture. Should the built-up roofing leak, water will not penetrate or damage the Foamglas Insulation.

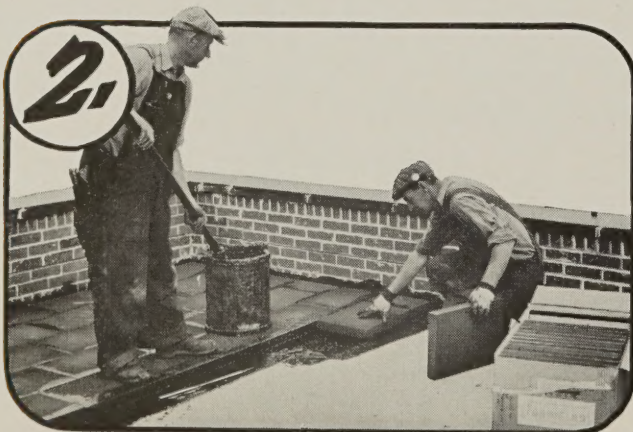
The fact that PC Foamglas is noncombustible is important for those jobs on which the roof-deck construction is of materials which are not fire-resistant, and which otherwise would be subject to fire hazards from sources outside of the building itself.

Due to its rigid nature and light weight, Foamglas is easy to handle and install. It can be cut and shaped on the job when necessary, with ordinary tools. This facilitates fitting around roof projections or openings.

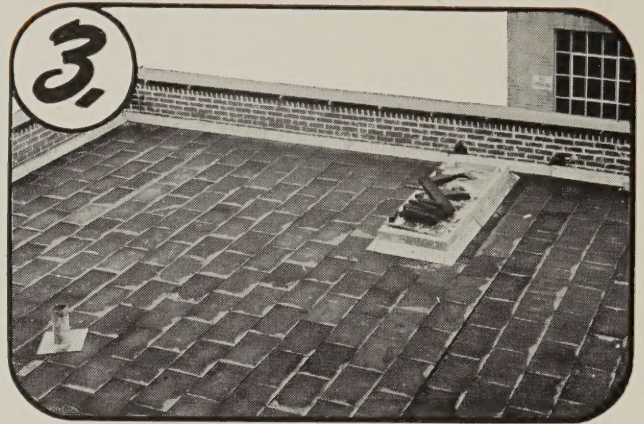
INSTALLATION PROCEDURE



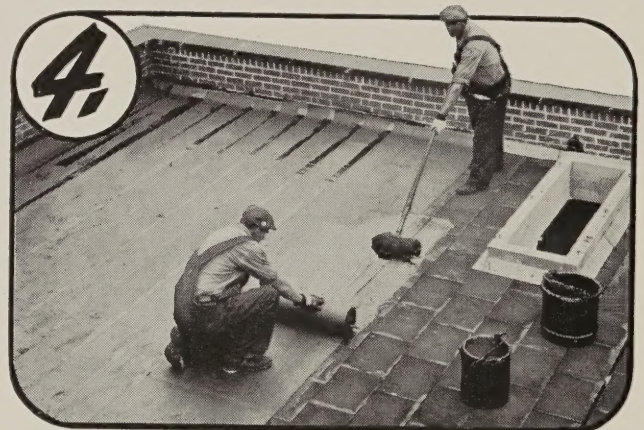
Deck construction shall be clean, sound, dry and level. Mop deck with uniform coat of hot pitch. (Where asphalt is used, concrete should first be primed.) Mop only area on which insulation can be laid immediately.



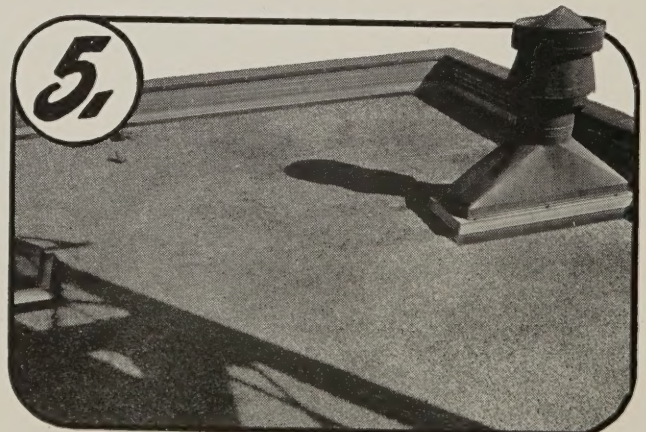
Foamglas Insulation shall be firmly imbedded in asphalt or pitch. All insulation shall be laid with tightly butted joints. Foamglas cannot be nailed in place. Lay insulation in parallel course, with end joints in each course breaking with those of adjoining courses.



Cant strips and necessary sealing and flashing shall be completed after insulation is laid. Protect completed insulation from weather until finished roofing is applied.

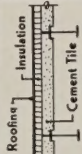
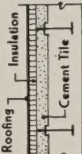
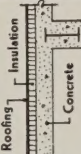
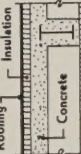
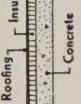
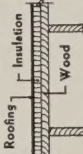
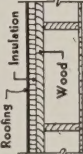
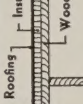
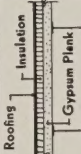
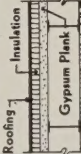
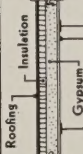
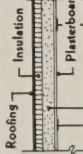
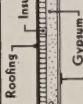
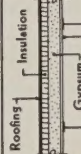
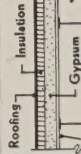
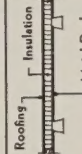
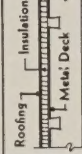


Mop Foamglas Insulation with uniform coat of hot pitch (or asphalt). Mop only area on which built-up roofing can immediately be laid. Built-up roofing shall be laid in accordance with best recommendations of the manufacturer of same.



The finished roof, using PC Foamglas as insulation, provides better control of interior temperatures, improves working conditions and reduces heating and air-conditioning costs. It eliminates damage to roof-deck construction resulting from rot and corrosion.

HEAT TRANSMISSION (U) THROUGH VARIOUS TYPES OF FLAT ROOFS

WITHOUT CEILING, UNDERSIDE OF ROOF EXPOSED										WITH METAL LATH & PLASTER CEILING									
INSULATED WITH FOAMGLAS					UN- INSUL- ATED	IDENT- ITY	DECK THICK- NESS	CONSTRUCTION	ROOF-DECK TYPE	CONSTRUCTION	IDENT- ITY	UN- INSUL- ATED	INSULATED WITH FOAMGLAS						
6"	4 1/2"	4"	3"	2"									2"	3"	4"	4 1/2"	6"		
.062	.080	.089	.12	.16	.84	A	1 5/8"		PRECAST CEMENT TILE		A-1	.43	.14	.10	.081	.074	.058		
.062	.080	.089	.12	.16	.82	B	2"		CONCRETE		B-1	.42	.14	.10	.081	.073	.058		
.061	.079	.088	.11	.16	.72	C	4"			C-1	.40	.13	.10	.080	.073	.057			
.060	.078	.087	.11	.15	.65	D	6"		WOOD		D-1	.37	.13	.098	.079	.072	.056		
.059	.075	.083	.11	.14	.49	E	1"			E-1	.32	.12	.094	.076	.070	.055			
.056	.072	.079	.098	.13	.37	F	1 1/2"			F-1	.26	.11	.088	.072	.066	.053			
.055	.070	.076	.094	.12	.32	G	2"			G-1	.24	.11	.086	.071	.065	.052			
.052	.064	.070	.084	.11	.23	H	3"				H-1	.18	.095	.077	.064	.060	.049		
.060	.077	.085	.11	.15	.58	J	2"		GYPSUM PLANK		J-1	.35	.13	.097	.078	.071	.056		
.057	.073	.080	.10	.13	.40	K	2 3/8"		GYPSUM FIBER CONC. ON 3/8" PLASTERBOARD		K-1	.27	.12	.089	.073	.067	.053		
.055	.070	.076	.094	.12	.32	L	3 3/8"			L-1	.23	.11	.084	.070	.064	.052			
.053	.066	.072	.088	.11	.26	M	2 1/2"		GYPSUM FIBER CONC. ON 1/2" RIGID INSULATION BOARD		M-1	.20	.10	.080	.067	.062	.050		
.062	.081	.090	.12	.17	.94	N	—		METAL DECK		N-1	.46	.14	.10	.082	.075	.058		

(U) values are expressed in B.T.U. per square foot per degree F. temperature difference per hour. Conditions assumed: mean temperature 50 degrees F., still air inside and 15 M.P.H. wind velocity outside.

NOTE: Nominal thicknesses of wood decks are shown. Actual thicknesses have been used to determine "U" values.

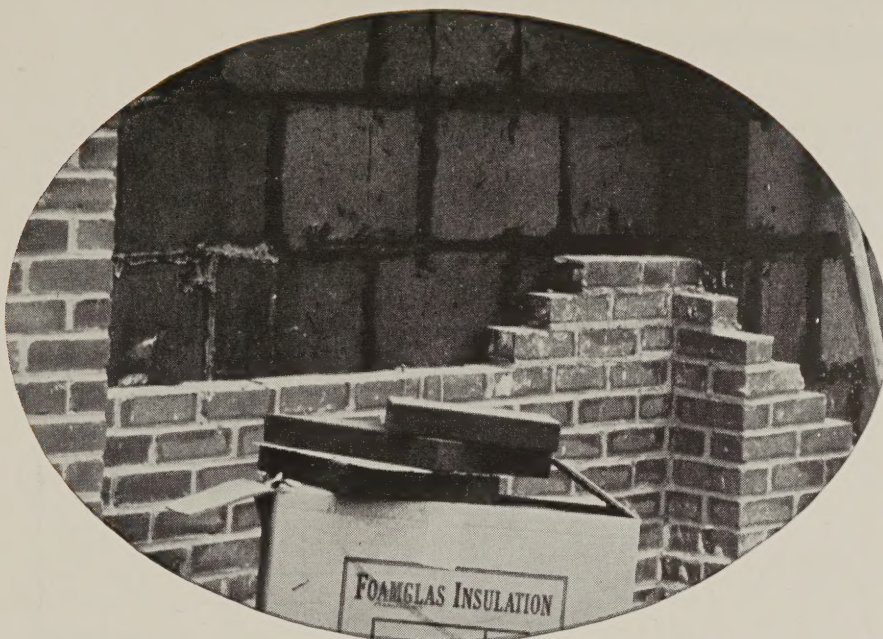
FOAMGLAS INSULATION FOR FLAT DECK ROOFS

SPECIFICATIONS FOR FOAMGLAS INSTALLATION ON FLAT DECK ROOFS

For Normal Temperature Applications

(Slope not exceeding 2" to 1'-0")

General Conditions	The "General Conditions" of the contract are a part of these specifications.
Scope of the Work	This contractor shall furnish all labor and material to install all PC Foamglas Insulation on roof decks as noted on the drawings, or as listed hereunder. This shall include the furnishing and application of (asphalt) (pitch)—whichever is required for the application of any membrane under the insulation and for the finished roofing—and any other materials necessary for a complete and satisfactory installation.
Insulation Material	Shall be PC Foamglas Insulation as manufactured by the Pittsburgh Corning Corporation in standard slabs 12" x 18" and shall be . . . inch thick (2", 3", 4" or 5") laid in (one), (two) layer(s). (Indicate total thickness of insulation required where two layers are used.)
Preparation of Roof Decks to Receive Insulation	GENERAL: The surface of all roof decks shall be smooth and level, without depressions. Where wood decks are used, all loose or springy boards shall be properly nailed in place before any insulation is laid. All decks shall be broomed clean, free from dirt, loose material and thoroughly dry. WOOD DECK: Apply sheathing paper, unsaturated felt or (tarred) (asphalt) roofing felt (indicate which type membrane required), which shall be installed according to best roofing practice before insulation is laid. PRECAST CONCRETE OR GYPSUM SLABS OR GYPSUM PLANK DECKS: All joints between (slabs) (planks) shall be properly grouted and struck flush. Membrane (shall) (shall not) be used under insulation. Where membrane is used, it shall be specified as above under "Wood Decks." Where membrane is not specified, the insulation shall be adhered to (slabs) (planks) by spot-mopping in place with hot (asphalt) (pitch). No mopping shall be permitted over joints of (slabs) (planks). Where insulation is spot-mopped in place with hot asphalt, the deck shall be coated first with asphalt primer. No primer is required for spot-mopping if pitch is used. MONOLITHIC CONCRETE OR GYPSUM DECKS: No membrane is required under the insulation. If asphalt is to be used for laying the insulation, the decks shall be coated with asphalt primer. No primer is required if pitch is used. STEEL DECKS: Steel decks shall not be subject to excessive deflection. Deck shall be free from any projections above the level of the steel deck such as bolt heads, etc., and shall be without holes through which the hot bitumen used for the laying of the insulation might drip. No membrane required under the insulation. If decks are painted no primer is necessary before applying asphalt.
Application of Insulation	GENERAL: Caution—Foamglas Insulation shall not be nailed in place. Foamglas Insulation will not absorb water; however, in order to prevent improper bond between the roofing materials and the insulation, it is necessary to keep the Foamglas dry before, during and after application. Only as much Foamglas Insulation shall be applied in any one day as can be covered with finished roofing the same day. Insulation shall be laid in parallel courses, staggered to break joints. Where two layers are used, the second layer shall break joints with the first. Where roof decks meet vertical surfaces, such as parapets, etc., the Foamglas shall be cut and fitted snugly. Where Foamglas finishes against cant strips it shall be beveled to a neat fit. APPLICATION OF FOAMGLAS: Where felts impregnated with coal tar pitch are used, Foamglas Insulation shall be laid with coal tar pitch. Where asphalt impregnated felts are used, Foamglas Insulation shall be laid with asphalt. Foamglas Insulation shall be firmly imbedded in hot (asphalt) (pitch) mopped on deck. Mop only area on which insulation can be laid immediately. All insulation shall be laid with tightly butted joints. When more than one layer is used, the additional layers shall be laid in the same manner as the first layer. Protect completed insulation from weather until finished roofing is applied. For application of finished roofing, mop insulation with uniform coat of hot (asphalt) (pitch). Mop only area on which roofing can immediately be laid.
Finished Roofing	The finished roofing shall be of type selected by the architect and shall be laid in accordance with the manufacturer's recommendations. For walk-on roofs a minimum of three plies of 15 lb. Roofing Felt shall be applied over the Foamglas Insulation.



When problems of temperature control, or condensation arise in connection with building construction, you will find it well worth-while to investigate PC Foamglas . . . the new insulating material for core wall construction.

It will not shrink, swell, warp or rot. It is verminproof and fireproof. Its insulation properties are permanent.

PC Foamglas may be used as wall insulation in connection with all types of masonry and concrete building construction, with whatever type of tile, block or brick facing you desire.

Blocks of Foamglas will support many times their own weight without danger of cracking or crushing. They cannot settle, pack down, or absorb moisture. In consequence, Foamglas eliminates expensive repairs and replacements often necessitated by deterioration of other insulating materials.

SPECIFICATIONS FOR INSULATING CORE WALLS

Specifications and Details shown are for use in Normal Temperature Applications

INSULATION:

Shall be PC Foamglas Insulation as manufactured by the Pittsburgh Corning Corporation in standard slabs 12" x 18" and shall be . . . inches thick (2", 3", 4" or 5").

MASONRY WORK:

All masonry work for core walls shall be laid plumb, level, straight, true to dimensions, and shall be laid with full mortar joints. Joints on the inside surface of the masonry walls shall be "plain cut." These surfaces shall also be free of any stray mortar. Masonry work and PC Foamglas Insulation shall be erected with the following procedure:—First, lay a lift of the exterior wythe. Second, lay a lift of the Foamglas. Third, lay a lift of the interior wythe. The height of one lift shall be equal to the vertical distance between wall ties.

WALL TIES:

Shall be of non-corrosive metal and shall be . . . type. (Insert wall tie specification here).

One wall tie shall be required for every . . . sq. ft. (or, sq. in.) of wall surface.

Wall ties shall be spaced every . . . course (or . . . inches apart vertically), and every . . . inches apart horizontally.

ASPHALTIC CEMENT:

Shall be of the following mix, measured by volume: 6 parts PC Asphalt Emulsion . . . 1 part Portland cement.

Make a paste of cement and water and then add the asphalt emulsion. Mix thoroughly, increasing the water content sufficiently to make mix workable under trowel. Batch size shall be such that can be used within one hour of mixing. All asphaltic cement not used within this time shall be discarded and no re-tempering shall be permitted. Asphaltic cement shall not be applied when temperature is below 40° F.

LAYING INSULATION:

PC Foamglas Insulation shall be laid plumb, level and true to dimensions. The insulation shall be laid with asphaltic cement joints. Joints shall finish 1/8" thick. When laying slabs apply only enough pressure to guarantee good, full joints. Do not disturb previously placed slabs. Where slabs are disturbed, remove same and reset with fresh asphaltic cement. Where it is necessary to cut or fabricate the Foamglas to fit the spacing of wall ties, openings, etc., all joints including the wall tie joints shall be sealed with asphaltic cement.

For proper alignment of Foamglas slabs, asphaltic cement gobs shall be used between the interior surface of the outside wythe and the insulation. (See details). The space between exterior wythe and the insulation shall be 1/4" or as may be required for proper alignment of Foamglas. Four gobs per slab shall be required. Apply only enough lateral pressure against the Foamglas to permit absolute contact between gobs and the exterior wythe.

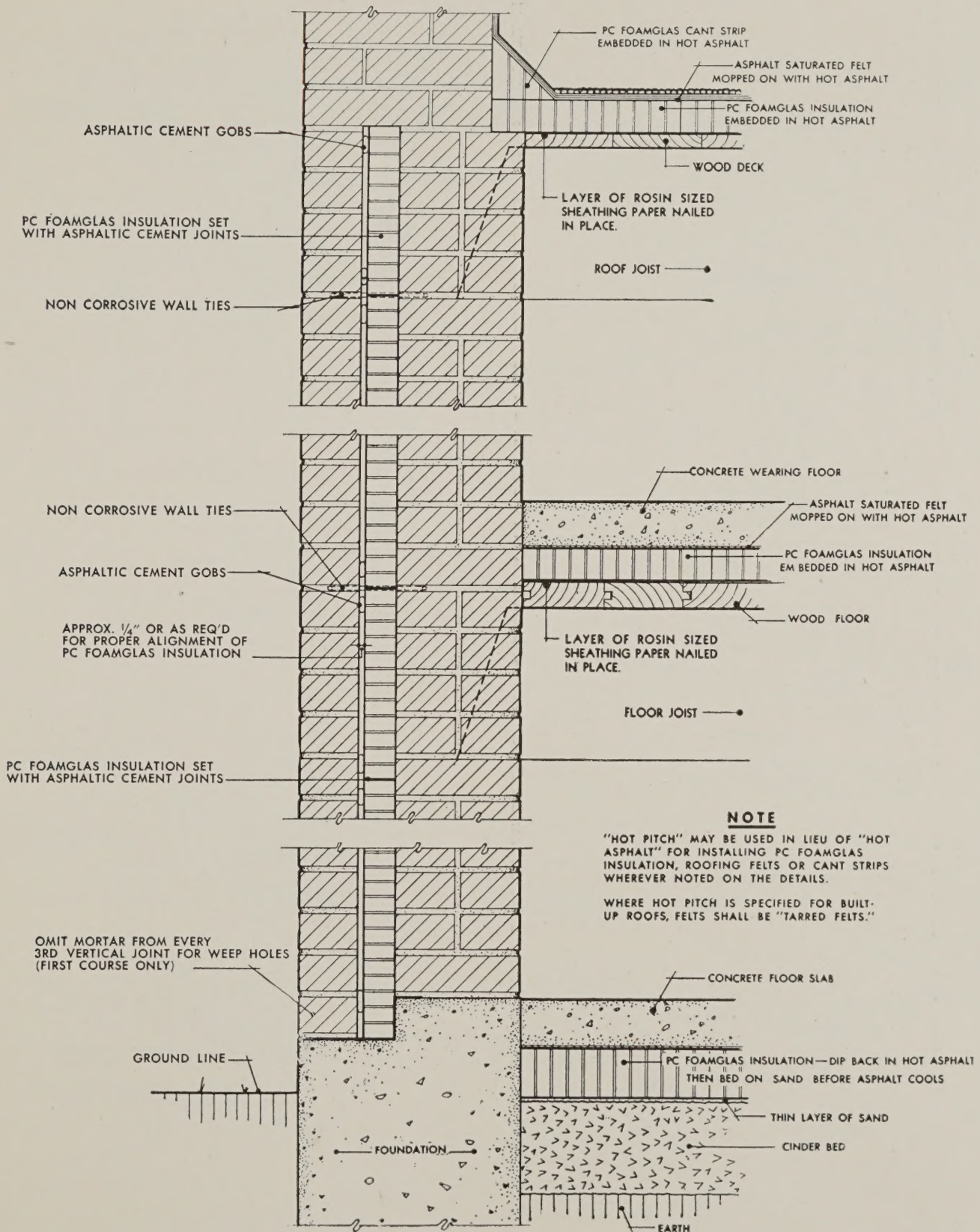
NOTE: Cement and gypsum plasters, or other materials which shrink in setting, cannot be applied directly to Foamglas. Therefore, as recommended in this catalog, tile or masonry veneer shall be used as interior finish over this insulation.

FOAMGLAS INSULATION FOR CORE WALLS

HEAT TRANSMISSION (U) THROUGH VARIOUS TYPES OF CORE WALLS INSULATED WITH FOAMGLAS

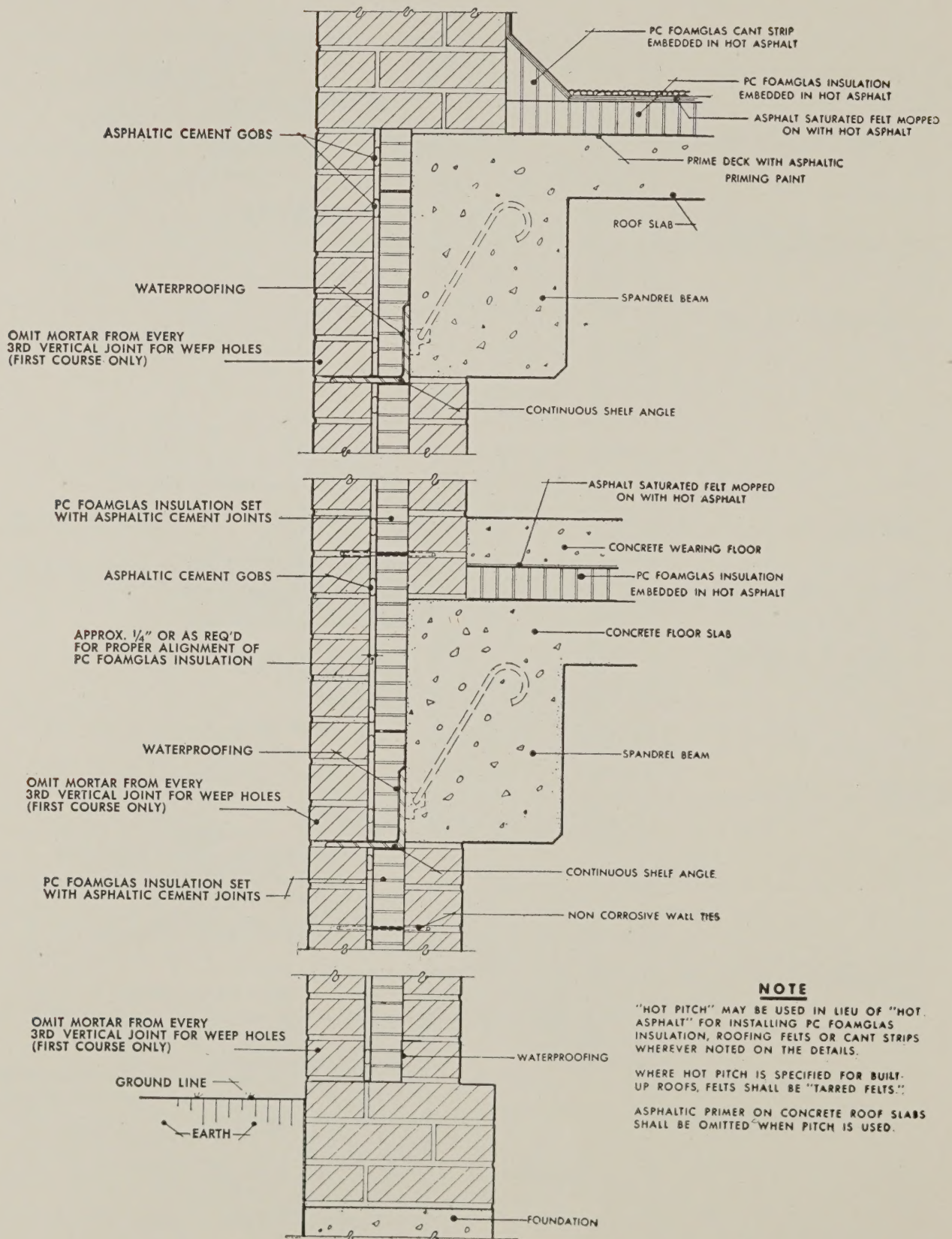
(U) VALUES ARE EXPRESSED IN B. T. U. PER. SQ. FT. PER DEG. FAHR. TEMP. DIFFERENCE PER HOUR. CONDI- TIONS ASSUMED: MEAN TEMP. 50 DEG. FAHR. STILL AIR INSIDE & 15 M. P. H. WIND VELOCITY OUTSIDE.	CONSTRUC- TION	WITH 3/4" PLASTER FINISH					WITH NO INTERIOR FINISH				
		INSULATED WITH FOAMGLAS					INSULATED WITH FOAMGLAS				
		2"	3"	4"	4 1/2"	6"	2"	3"	4"	4 1/2"	6"
WALL TYPE											
BRICK											
4" FACE BRICK & 4" COMMON BRICK		.14	.10	.082	.074	.058	.14	.11	.083	.075	.059
4" FACE BRICK & 8" COMMON BRICK		.12	.095	.077	.070	.055	.13	.097	.079	.071	.056
4" FACE BRICK & 12" COMMON BRICK		.11	.088	.072	.066	.053	.12	.090	.074	.068	.054
BRICK & CONCRETE											
4" FACE BRICK & 6" CONCRETE		.14	.11	.083	.075	.059	.15	.11	.085	.077	.060
4" FACE BRICK & 10" CONCRETE		.14	.10	.081	.074	.058	.14	.10	.083	.075	.059
4" FACE BRICK & 16" CONCRETE		.13	.10	.078	.071	.056	.13	.10	.080	.072	.057
BRICK & HOLLOW TILE											
4" FACE BRICK & 4" HOLLOW TILE		.13	.10	.080	.073	.057	.14	.10	.082	.074	.058
4" FACE BRICK & 6" HOLLOW TILE		.12	.095	.077	.070	.055	.13	.097	.079	.071	.056
4" FACE BRICK & 8" HOLLOW TILE		.12	.094	.076	.070	.055	.13	.096	.077	.070	.056
4" FACE BRICK & 10" HOLLOW TILE		.12	.094	.076	.070	.055	.13	.096	.077	.070	.056
HOLLOW TILE & STUCCO											
4" HOLLOW TILE, 4" HOLLOW TILE & 1" STUCCO		.12	.094	.076	.070	.055	.13	.097	.078	.071	.059
4" HOLLOW TILE, 6" HOLLOW TILE & 1" STUCCO		.11	.089	.073	.067	.053	.12	.091	.074	.068	.054
4" HOLLOW TILE, 8" HOLLOW TILE & 1" STUCCO		.11	.088	.072	.066	.053	.12	.090	.074	.068	.054
CONCRETE & HOLLOW TILE											
4" CONCRETE & 4" HOLLOW TILE		.14	.10	.081	.074	.058	.14	.10	.083	.075	.059
4" CONCRETE & 6" HOLLOW TILE		.13	.097	.078	.071	.056	.13	.099	.079	.072	.057
4" CONCRETE & 8" HOLLOW TILE		.12	.095	.077	.070	.055	.13	.097	.079	.071	.056
STONE & HOLLOW TILE											
4" STONE & 6" HOLLOW TILE		.13	.096	.077	.070	.056	.13	.10	.079	.072	.056
4" STONE & 8" HOLLOW TILE		.12	.095	.077	.070	.055	.13	.097	.079	.071	.056
4" STONE & 10" HOLLOW TILE		.12	.094	.076	.070	.055	.13	.097	.078	.071	.056
4" STONE & 12" HOLLOW TILE		.11	.088	.072	.066	.053	.12	.090	.074	.068	.054
CONCRETE BLOCK & HOLLOW TILE											
8" CONCRETE BLOCKS & 4" HOLLOW TILE		.12	.094	.076	.070	.055	.13	.097	.078	.071	.056
8" CONCRETE BLOCKS & 6" HOLLOW TILE		.12	.091	.074	.068	.054	.12	.093	.076	.069	.055
8" CONCRETE BLOCKS & 8" HOLLOW TILE		.11	.088	.072	.066	.053	.12	.090	.074	.068	.054
BRICK & CINDER BLOCK											
4" FACE BRICK & 8" CINDER BLOCKS		.12	.094	.076	.070	.055	.13	.097	.078	.071	.056
4" FACE BRICK & 10" CINDER BLOCKS		.11	.087	.071	.066	.053	.11	.089	.073	.067	.053
4" FACE BRICK & 12" CINDER BLOCKS		.097	.078	.066	.061	.049	.10	.080	.067	.062	.050
BRICK & CONCRETE BLOCK											
4" FACE BRICK & 8" CONCRETE BLOCKS		.13	.10	.080	.073	.057	.14	.10	.081	.074	.058
4" FACE BRICK & 10" CONCRETE BLOCKS		.13	.099	.079	.072	.057	.14	.10	.081	.073	.058
4" FACE BRICK & 12" CONCRETE BLOCKS		.13	.099	.079	.072	.056	.13	.10	.080	.073	.057

PC FOAMGLAS INSULATION IN LOAD BEARING TYPE CORE WALL CONSTRUCTION

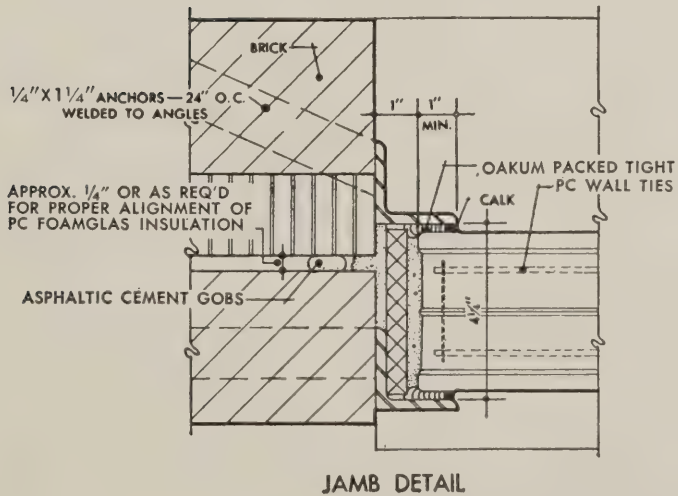
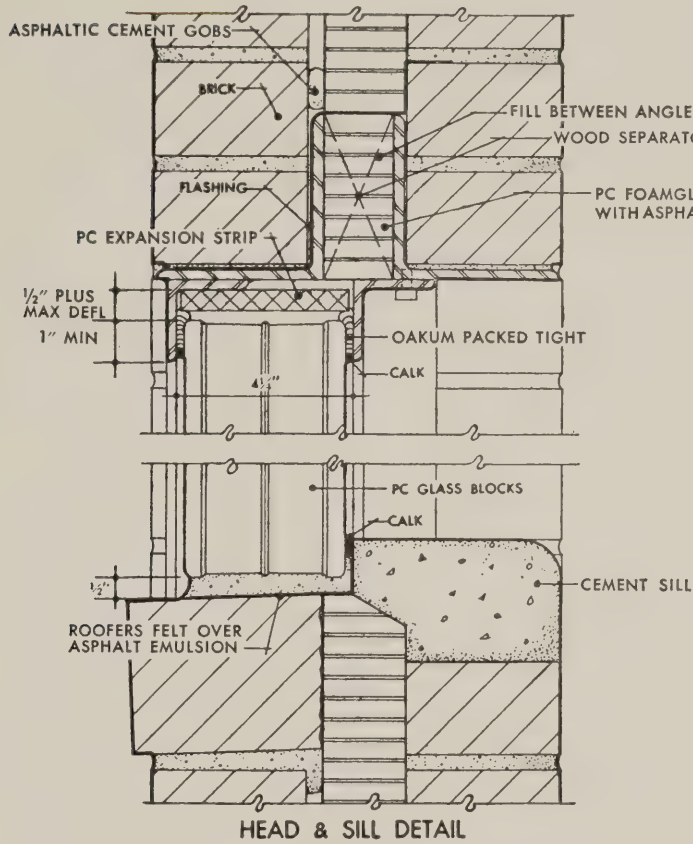


FOAMGLAS INSULATION FOR CORE WALLS

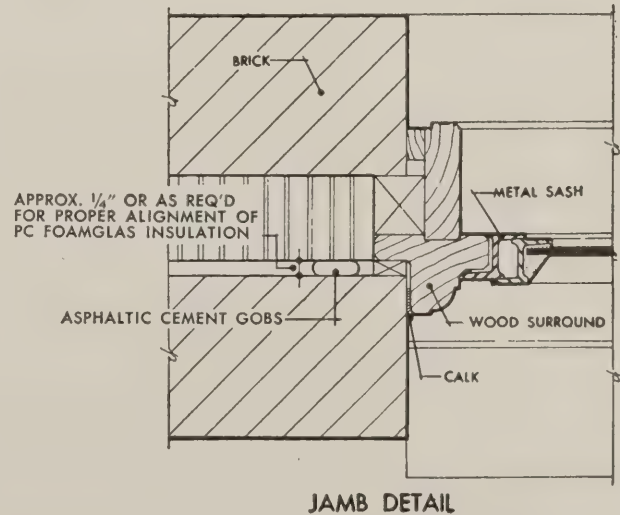
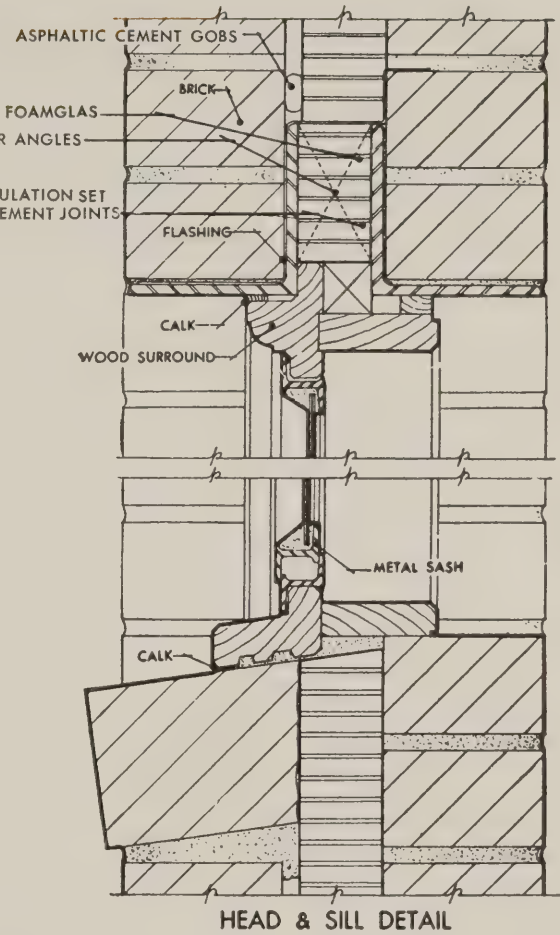
PC FOAMGLAS INSULATION IN PANEL TYPE CORE WALL CONSTRUCTION



GLASS BLOCK PANELS IN CORE WALL CONSTRUCTION

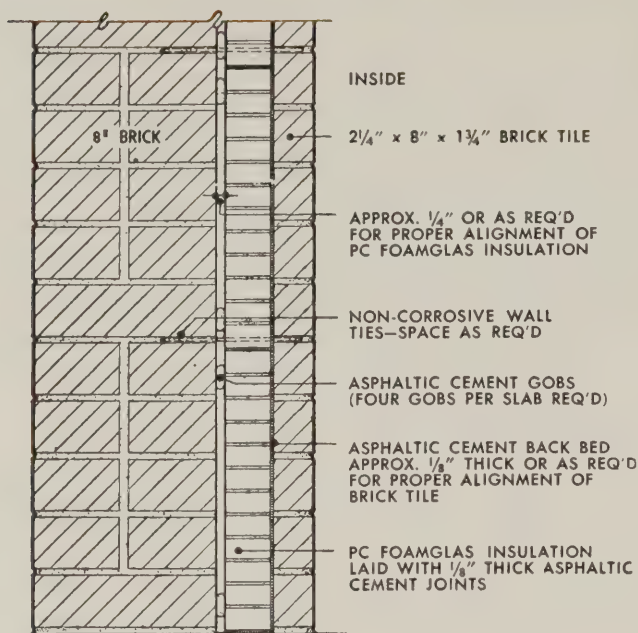


METAL SASH IN CORE WALL CONSTRUCTION



FOAMGLAS INSULATION FOR CORE WALLS

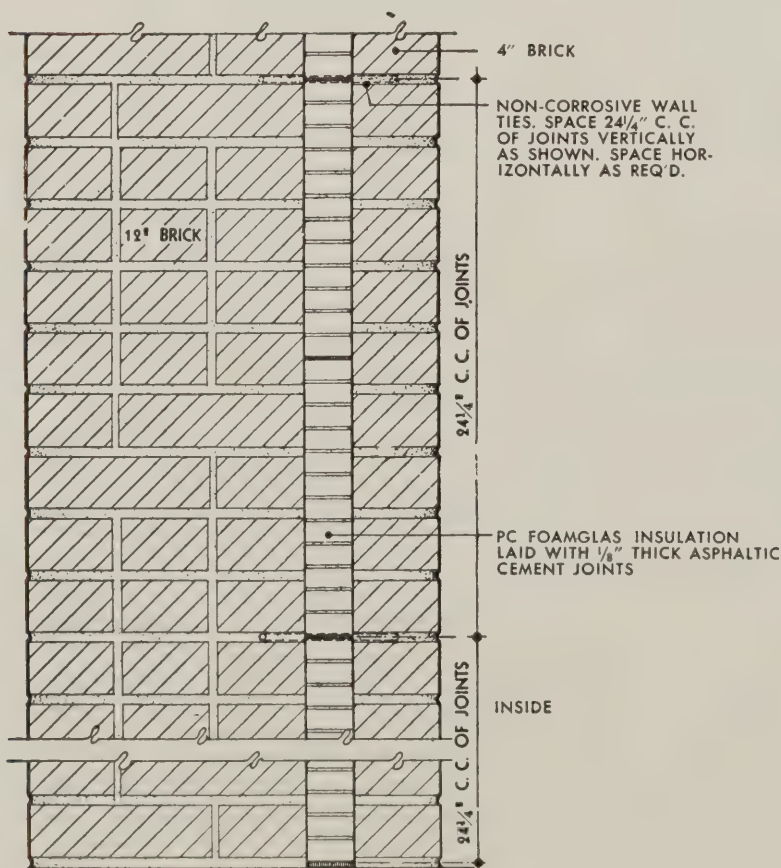
SPECIAL TYPES OF WALL APPLICATIONS



TYPICAL WALL TYPE "A"

• Wall Type "A" varies from other core wall details shown, in that the inner wall is considered a veneer. This veneer wall, having little stability during erection, requires additional bond between it, the Foamglas, and the outer masonry wythe. This additional bond is obtained with the use of asphaltic cement gobs and back bedding as well as wall ties (see detail).

In this type of construction the exterior wall can be erected before the Foamglas and inner veneer are laid, or it may be laid in lifts of approximately 24". This detail is also adaptable for insulating and veneering existing masonry walls. In existing work corrugated wall ties should be used.*



TYPICAL WALL TYPE "B"

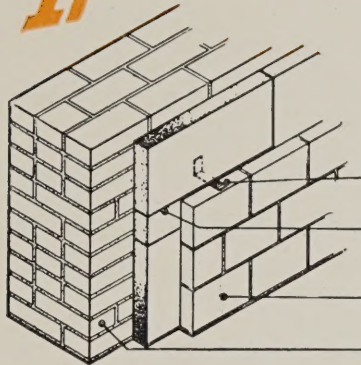
• Wall Type "B" is also different from other core wall details shown. This type of wall incorporates an interior veneer wall with considerable stability. This detail shows no space between Foamglas and masonry walls. This is permissible where the inside surface of the exterior wall can be laid plumb, level and straight, and where the interior wall surface does not necessarily need to be perfectly flush.

For ease of erection, this type wall shall be laid up in lifts of 24 1/4" c.c. of joints.*

*See "Specifications" on Page 7 for wall ties, laying of masonry, asphaltic cement mix, and other data pertaining to these special types of wall applications.

METHODS OF FITTING WALL TIES

1.



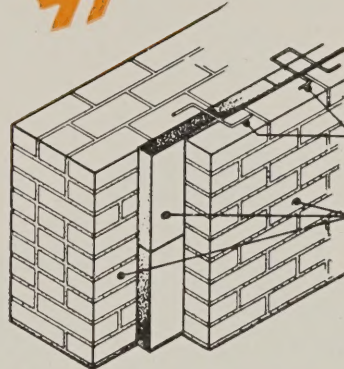
CORRUGATED OR RIBBED TYPE WALL TIES. SPACE AS REQUIRED.

CUT PC FOAMGLAS INSULATION SLAB AT WALL TIE LEVEL AS SHOWN AND SET AS TWO INDIVIDUAL UNITS

GLAZED TILE OR OTHER MASONRY VENEER

EXISTING MASONRY WALL OR NEW WALL IN PLACE BEFORE INSULATION & MASONRY VENEER ARE LAID

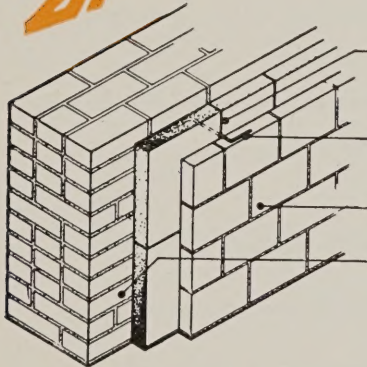
4.



"Z" OR "U" TYPE WALL TIES. SPACE VERTICALLY IN MATCHED MASONRY MORTAR JOINTS AS SHOWN

RAISE EXTERIOR BRICK WALL. PC FOAMGLAS INSULATION AND INTERIOR BRICK WALL IN LIFTS OF 24 1/4" C.C. OF JOINTS

2.



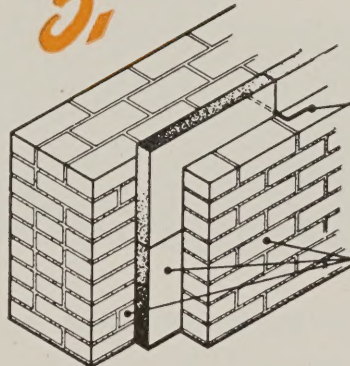
CUT PC FOAMGLAS INSULATION SLAB IN VERTICAL LINE WITH WALL TIE AS SHOWN AND SET AS TWO INDIVIDUAL UNITS

"Z" TYPE WALL TIES. SPACE VERTICALLY IN MATCHED MASONRY MORTAR JOINTS AS SHOWN

GLAZED TILE OR OTHER MASONRY VENEER

MASONRY WALL IN PLACE BEFORE INSULATION & MASONRY VENEER ARE LAID

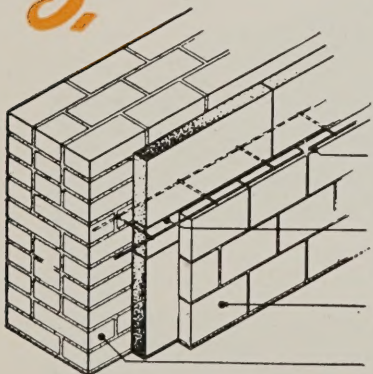
5.



"Z" TYPE WALL TIES. SPACE WALL TIES 36 1/4" C.C. HORIZONTALLY SO THAT THEY WILL OCCUR IN ALTERNATE VERTICAL JOINTS OF PC FOAMGLAS INSULATION SLABS. SPACE VERTICALLY IN MATCHED MASONRY MORTAR JOINTS AS SHOWN

EXTERIOR & INTERIOR MASONRY WALL SHALL BE LAID IN LIFTS OF AS NEAR 24 1/4" C. C. OF JOINTS AS IS PRACTICABLE

3.



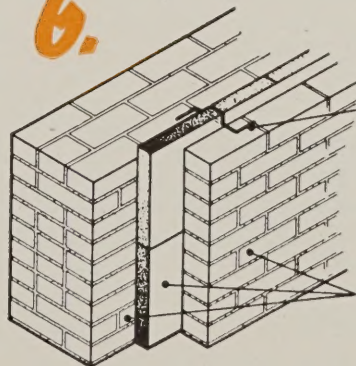
CONTINUOUS WIRE MESH WALL TIES. SPACE VERTICALLY IN MATCHED MASONRY MORTAR JOINTS AS SHOWN.

CUT PC FOAMGLAS INSULATION SLABS AT WALL TIE LEVEL AS SHOWN AND SET AS TWO INDIVIDUAL COURSES

GLAZED TILE OR OTHER MASONRY VENEER

MASONRY WALL IN PLACE BEFORE INSULATION & MASONRY VENEER ARE LAID

6.



"Z" TYPE WALL TIES NEAR TOP OR BOTTOM OF PC FOAMGLAS INSULATION SLAB MAY BE SET IN GROOVE AS SHOWN AND SEALED WITH SAME MATERIAL USED FOR FOAMGLAS JOINTS. GROOVE DEPTH SHOULD NOT EXCEED 1 1/4" SPACE WALL TIES VERTICALLY IN MATCHED MASONRY MORTAR JOINTS AS SHOWN

EXTERIOR MASONRY WALL, PC FOAMGLAS INSULATION AND INTERIOR MASONRY WALL SHALL BE LAID, IN LIFTS OF APPROXIMATELY 2 FEET

GENERAL NOTES

- Specifications for wall ties and spacing of same vary with building locale and local building code requirements.
- PC Foamglas Insulation readily adapts itself to these varying conditions because it is easy to cut and shape. It can be cut with a cheap saw, a roofer's knife or a mason's trowel
- These details show several methods of fitting Foamglas slabs to various types of wall ties and wall tie spacing

Any one or a combination of these methods can be used

- Building codes, in general, require one wall tie for a given area of wall surface. In order to avoid conflict with the individual building code requirements, the actual dimensions for wall tie spacing have been omitted from the details wherever possible
- All joints created in fitting the insulation around wall ties shall be filled with the same material used in the joints of the whole Foamglas slabs

FOAMGLAS INSULATION FOR FLOORS



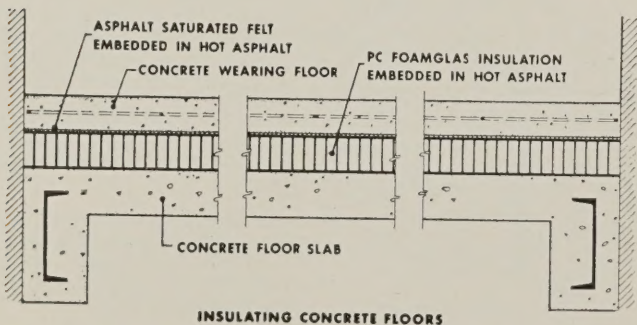
This hand truck, carrying the 400 lb. barrel, was dropped 100 times on the concrete cover floor without any damage to the Foamglas Insulation.

- This new, trouble-free insulation for floors is light, strong, economical. It is impervious to deteriorating elements that attack other insulating materials, maintains its insulating efficiency indefinitely.

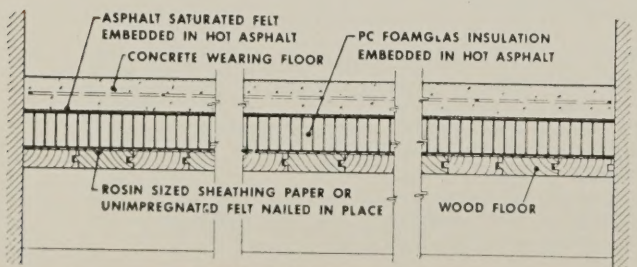
This cellular floor insulating material—PC Foamglas—should enjoy general acceptance among plant managers because of its permanent insulating efficiency and its ability to carry weights much heavier than normal floor loads.

TYPICAL INSTALLATIONS

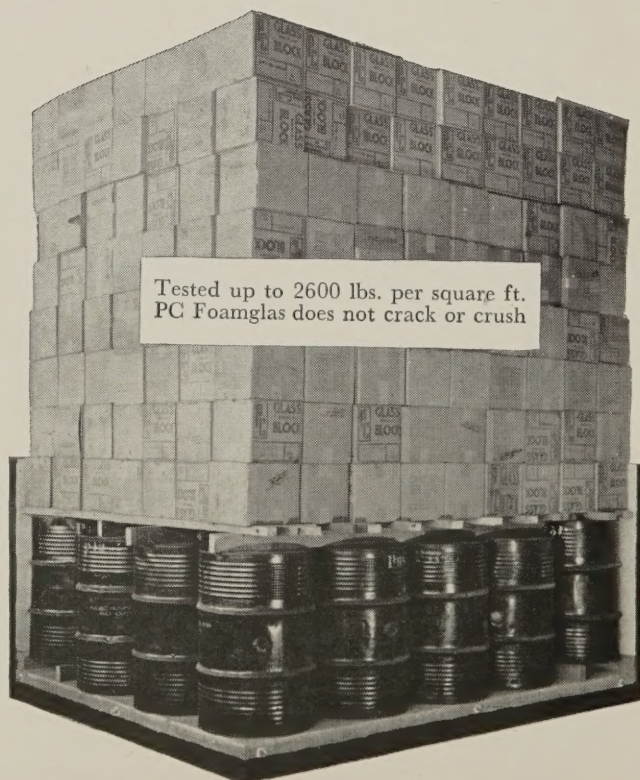
- This is how PC Foamglas should be applied to insulate two kinds of floors which are widely used in industrial buildings. Recommendations for installing Foamglas for floors on ground are available upon request.



INSULATING CONCRETE FLOORS



INSULATING WOOD FLOORS



Tested up to 2600 lbs. per square ft.
PC Foamglas does not crack or crush

SPECIFICATIONS FOR INSULATING FLOORS IN NORMAL TEMPERATURE APPLICATIONS

INSULATION:

Shall be PC Foamglas Insulation as manufactured by the Pittsburgh Corning Corporation in standard slabs 12" x 18" and shall be inches thick (2", 3", 4" or 5") laid in (one) (two) layer(s). (Indicate total thickness required where two layers are used.)

PREPARATION OF FLOORS:

WOOD FLOORS: The surface of all wood floors to be insulated shall be reasonably smooth and level, without depressions. All loose or springy boards shall be properly nailed in place. Floors shall be broomed clean, free from dirt, loose material, and thoroughly dry before proceeding. Over all wood floors to be insulated apply a layer of rosin-sized sheathing paper or unsaturated felt, lapping the edges at least 3" and nailing along the edges to hold in place until the insulation is laid.

CONCRETE FLOORS: All new concrete floor slabs to be insulated shall be thoroughly cured. All floors shall be reasonably smooth and level, without depressions, and shall be broomed clean and free of grease or dirt.

LAYING INSULATION:

GENERAL: PC Foamglas Insulation shall be laid in parallel courses, staggered to break joints. Where

two layers are used, the second layer shall break joints with the first. All insulation shall be laid with tightly butted joints.

OVER WOOD & CONCRETE FLOORS: All PC Foamglas Insulation over wood and concrete floors shall be firmly embedded in hot asphalt and shall be laid progressively as the hot asphalt is mopped on the floor. Avoid mopping large areas that cannot be covered with insulation before the hot asphalt cools. When more than one layer is used, the additional layers shall be laid in the same manner as the first.

LAYING ASPHALT SATURATED FELTS:

After PC Foamglas is laid, mop on a layer of 15-pound asphalt saturated felt with hot asphalt. When mopping the insulation and before the felt is laid, the hot asphalt shall be slushed into and fill all joints.

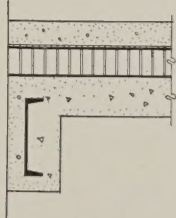
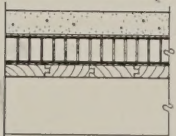
WEARING FLOOR:

Install a reinforced monolithic concrete floor inches thick (3" minimum) over the insulation.

The concrete shall be mixed to the following proportions by volume: 1 part Portland cement—2 parts clean, sharp sand—3 parts gravel.

Reinforce the concrete slabs with inch bars inch O.C., each way (or No. gauge welded wire mesh inch O.C., each way).

HEAT TRANSMISSION "U" THROUGH VARIOUS TYPES OF FLOORS

FLOORS ABOVE GROUND WITH 3" CONCRETE WEARING FLOOR								
FLOOR TYPE	CONSTRUCTION	IDENTITY	UNINSULATED (WEARING FLOOR NOT INCLUDED)	INSULATED WITH FOAMGLAS (WEARING FLOOR INCLUDED)				
				2"	3"	4"	4½"	6"
CONCRETE								
3" CONCRETE		A	.68	.15	.11	.087	.079	.061
4" CONCRETE		B	.65	.15	.11	.087	.078	.060
5" CONCRETE		C	.62	.15	.11	.086	.078	.060
6" CONCRETE		D	.59	.15	.11	.085	.077	.060
7" CONCRETE		E	.56	.15	.11	.085	.077	.060
8" CONCRETE		F	.54	.15	.11	.084	.076	.059
WOOD								
1½" WOOD		G	.37	.13	.098	.079	.072	.056
2" WOOD		H	.31	.12	.093	.076	.069	.055
3" WOOD		J	.24	.11	.087	.071	.065	.052

NOTE: Nominal thicknesses of wood floors are shown.
Actual thicknesses have been used to determine "U" Value.

PC FOAMGLAS has proved to be the most efficient and truly economical insulation material for use on tanks and other large containers in processing industries. The tank shown is a typical application of PC Foamglas Insulation, applied according to the following specifications. The use of PC Foamglas to insulate the oil extraction fractionating tower illustrated below is representative of the wide range of PC Foamglas uses. Our insulation specialists will be glad to consult with you regarding your individual insulating problems. This service is offered without any obligation on your part.

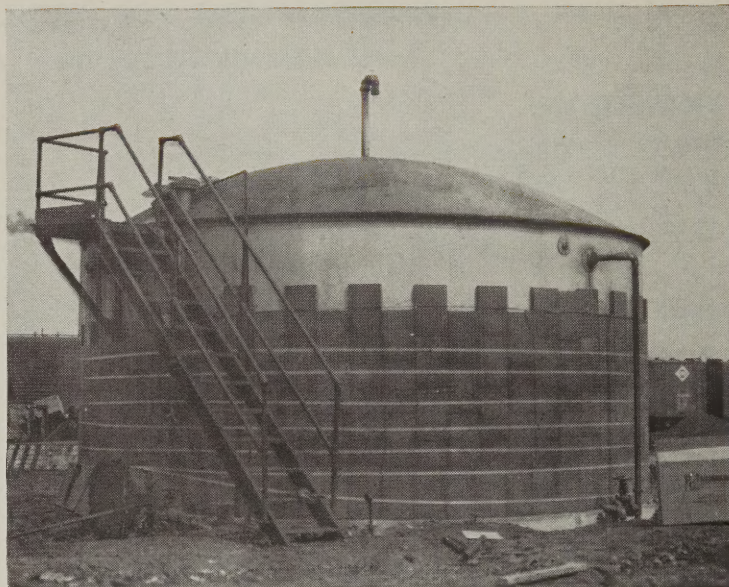
Specifications for insulating tanks up to 800° F. temperature

GENERAL:

On equipment operating above 300° F. where the temperature increase per hour exceeds 125° F., the insulation shall be protected by a sufficient thickness of insulating cement to prevent thermal shock in excess of the 125° F. per hour increase.

MATERIALS:

Insulation shall be PC Foamglas fabricated from standard 12" x 18" blocks, 2", 3", 4" or 5" thick, to a minimum thickness of . . . inches. Bands shall be double galvanized steel 1/2" x .015" on diameters five feet or less; 1/2" x .020" on diameters six feet to ten feet; 3/4" x .020" on diameters eleven feet to fifteen feet; 3/4" x .023" on diameters sixteen feet to twenty feet; 3/4" x



.028" on diameters twenty-one feet to twenty-five feet; and 1 1/4" x .035" on diameters twenty-six feet and over.

Seals shall be double galvanized insulation seals, of a size in proportion to the size bands used, but in no case shorter than 1".

Wire mesh shall be 20 gauge 1" hex galvanized after weaving.

Finish shall be PC Pittcote.

APPLICATION:

The base course shall bear on a shelf angle or similar element. Apply base course in alternate 18" and 9" blocks vertically, using a rope with coil spring insert to hold this first course temporarily in place. After the first course is in place, the first steel band shall be applied 4 1/2" from the bottom of the blocks. Bands shall be 9" on centers thereafter.

The bands shall be machine stretched and sealed with two seals for each connection.

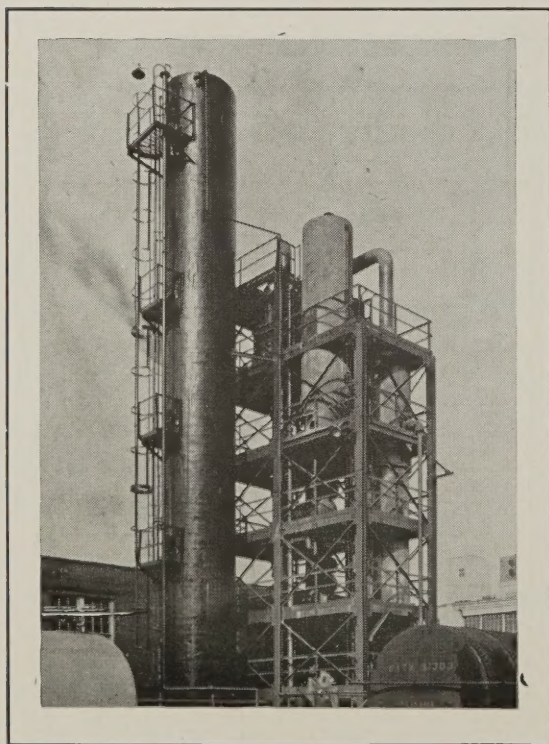
The second and succeeding courses of Foamglas shall be made with 18" blocks. These will be held in place by friction between the blocks and the rope holding device may not be required.

The succeeding courses shall be similarly installed, each course being banded and sealed before the next course is started.

After the insulation has been permanently banded, a layer of wire mesh shall be applied over the surface, tightly stretched and securely laced at all edges with 16 gauge galvanized soft iron wire.

FINISH:

All edges, voids or open joints shall be pointed up with PC Pittcote. After the pointing is dry, the entire surface of the insulation shall be covered with PC Pittcote, applied in two coats at the rate of one pound per sq. ft. per coat; each coat being approximately 1/8" thick, when wet. The first coat shall be hand dry before the second coat is applied. Finish all edges clean and true, and trowel all surfaces to a smooth finish. On equipment where the solvent does not create a fire hazard during the drying out period a good grade of asphalt cutback may also be used. This should be applied in two layers with a glass cloth membrane between the two coats. The total thickness of the cutback finish should not exceed 1/8".



NOTE: The above specification is primarily intended for Vertical Tanks and Towers. For Horizontal Tanks, specifications are similar except for auxiliary materials and procedure. Complete specifications will be furnished upon request.

PITTSBURGH CORNING CORPORATION

632 Duquesne Way • Pittsburgh 22, Pa.